

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

BIO-RAD LABORATORIES, INC., THE
UNIVERSITY OF CHICAGO,
LAWRENCE LIVERMORE NATIONAL
SECURITY LLC, and PRESIDENT AND
FELLOWS OF HARVARD COLLEGE

Plaintiffs,

v.

DROPWORKS, INC.,

Defendant.

C.A. No. 20-00506-RGA

DEMAND FOR JURY TRIAL

DROPWORKS, INC.’S ANSWER TO THIRD AMENDED COMPLAINT

Defendant Dropworks, Inc. (“Dropworks”) hereby answers Plaintiffs Bio-Rad Laboratories, Inc. (“Bio-Rad”), the University of Chicago, Lawrence Livermore National Security LLC (“LLNS”), and President and Fellows of Harvard College’s (“Harvard University”) (collectively, “Plaintiffs”) Third Amended Complaint (“TAC”) for Patent Infringement, by corresponding paragraph numbers as follows. Unless specifically admitted, Dropworks denies each and every allegation made by Plaintiffs in the TAC and states as follows:

PRELIMINARY STATEMENT

Dropworks is a life sciences start-up working towards a better digital PCR platform. Digital PCR is a method of quantitatively measuring DNA or RNA by counting the number of individual DNA or RNA molecules present in a sample. Dropworks’ Continuum Digital Flow PCR System aims to provide fast, high-throughput analysis, while maintaining detection sensitivity and a single-step (“hit run and walk away”) workflow. While the Continuum Digital Flow PCR System is for research use only, Dropworks hopes to contribute to future innovations

in personalized medicine and point-of-care diagnostics. Dropworks has yet to bring its system to the market.

Plaintiffs are research science giants. Bio-Rad employs over 8,000 people worldwide and had \$2.2 billion in sales revenue in 2019. Plaintiffs assert direct infringement claims against Dropworks based on seven patents—U.S. Patent Nos. 8,304,193 (the “’193 patent”), 9,127,310 (the “’310 patent”), RE41,780 (the “’780 patent”), RE43,365 (the “’365 patent”), and 9,056,289 (the “’289 patent”), 8,822,148 (“’148 patent”), and 91,132,394 (“’394 patent”) (collectively, the “Asserted Patents”). Plaintiffs also seek a declaratory judgment that Dropworks indirectly infringes each of the Asserted Patents. Dropworks herein raises counterclaims seeking a declaratory judgment that the Asserted Patents are invalid and that Dropworks does not infringe them.

NATURE OF THE ACTION¹

1. Dropworks admits that Plaintiffs purport to bring this action alleging patent infringement arising under the United States Patent Act, 35 U.S.C. § 1 *et seq.*, and under the Declaratory Judgment Act, 28 U.S.C. §§ 2001 and 2002.

2. Dropworks admits that Plaintiffs purport to bring this action based on the United States Patent Act, 35 U.S.C. § 1 *et seq.*, to enforce their alleged rights under the Asserted Patents. Dropworks denies any remaining allegations in paragraph 2.

THE PARTIES

3. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 3 and on that basis denies them.

4. Dropworks lacks sufficient knowledge or information to form a belief as to the

¹ Dropworks generally repeats the headings of the TAC for the Court’s convenience, without adopting them for their substance.

truth of the allegations set forth in paragraph 4 and on that basis denies them.

5. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 5 and on that basis denies them.

6. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 6 and on that basis denies them.

7. Admitted.

JURSDICTION AND VENUE

8. Dropworks admits that Plaintiffs purport to bring this action for patent infringement under the United States Patent Act, 35 U.S.C. § 1 *et seq.*

9. Dropworks admits that this action falls within the ambit of 28 U.S.C. §§ 1331 and 1338(a) if the justiciability requirements are met.

10. Dropworks admits that this Court has personal jurisdiction over Dropworks.

11. Dropworks admits that venue is proper in this District for purposes of this action.

BACKGROUND

12. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 12 and on that basis denies them.

13. Dropworks admits that it was incorporated in the State of Delaware on June 16, 2016. Dropworks admits that it is developing a product referred to as the Continuum Digital Flow PCR System, a self-contained instrument that performs digital PCR in droplets. Dropworks denies any remaining allegations in paragraph 13.

14. Dropworks admits that it tests and uses experimental and development models of the Continuum Digital Flow PCR System in connection with its internal research and development. Dropworks denies any remaining allegations in paragraph 14.

15. Dropworks admits that it is headquartered in the United States and that certain work pertaining to development and marketing of the Continuum Digital Flow PCR System occurs in the United States. Dropworks denies any remaining allegations in paragraph 15.

16. Dropworks admits that (1) Exhibit O appears to be a copy of a portion of the Dropworks website (dropworks.com); (2) Exhibits P-T and W appear to be copies of Tweets posted by Dropworks; (3) Exhibit U appears to be a copy of a portion of Dropworks' Twitter profile; and (4) Exhibit V appears to be a copy of a portion of Dropworks' LinkedIn profile. Dropworks admits that it intends to launch its Continuum Digital Flow PCR System for sale. Otherwise, the above exhibits speak for themselves and Dropworks denies any remaining allegations in paragraph 16.

17. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System and intends to sell the Continuum Digital Flow PCR System in the future. Dropworks denies any remaining allegations in paragraph 17.

18. Denied.

COUNT I
(Direct Infringement of U.S. Patent No. 8,304,193)

19. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

20. Dropworks admits that Exhibit A appears to be a copy of U.S. Patent No. 8,304,193 B2, entitled "Method for Conducting an Autocatalytic Reaction in Plugs in a Microfluidic System," and which states on its face that it was issued on November 6, 2012. Dropworks denies any remaining allegations in paragraph 20.

21. Dropworks denies that Rustem F. Ismagilov, Joshua David Tice, Cory John Gerdt, and Bo Zheng are the sole and true inventors of the '193 patent. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 21 and on that basis denies them.

22. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 22 and on that basis denies them.

23. Denied.

24. Dropworks admits that Exhibit F appears to be a claim chart for claims 1-8 and 11-14 of the '193 patent. Dropworks denies that Exhibit F *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of those claims of the '193 patent. The remaining allegations in paragraph 24 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 24.

25. Dropworks admits that Exhibit M appears to be an Information Disclosure Statement ("IDS") filed for United States Patent Application No. 16/413,416 that cites to the '193 patent, but denies that Dropworks filed that IDS or cited the '193 patent in it. Dropworks admits that United States Patent Application No. 16/413,416 is entitled "Systems and Methods Related to Continuous Flow Droplet Reaction," and names as an inventor Dropworks co-founder Andrew Larsen. Dropworks admits that Exhibit N appears to be an IDS filed for United States Patent Application No. 16/372,290 that cites to the '193 patent. Dropworks admits that United States Patent Application No. 16/372,290 is entitled "Systems and Methods for Serial Flow Emulsion Processes," and was filed by Dropworks. Dropworks admits that it has had notice of the '193 patent and Plaintiffs' allegations in the Complaint since the filing and service of Plaintiffs' Complaint (D.I. 1). Dropworks denies any remaining allegations in paragraph 25.

26. Denied.

27. Denied.

28. Denied.

29. Dropworks admits that, through its counsel, it filed an IDS for United States Patent Application No. 16/372,290 that cites to the '193 patent. Dropworks denies any remaining allegations in paragraph 29.

COUNT II
(Declaratory Judgment of Indirect Infringement of the '193 Patent)

30. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

31. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

32. Admitted.

33. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit F appears to be a claim chart of claims 1-8 and 11-14 of the '193 patent. Dropworks denies any remaining allegations in paragraph 33.

34. Denied.

35. Denied.

36. Denied.

37. Denied.

38. Denied.

39. Denied.

COUNT III
(Direct Infringement of U.S. Patent No. 9,127,310)

40. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

41. Dropworks admits that Exhibit B appears to be a copy of U.S. Patent No. 9,127,310 B2, entitled "Digital Analyte Analysis," and which states on its face that it was issued on September 8, 2015. Dropworks denies any remaining allegations in paragraph 41.

42. Dropworks admits that the '310 patent states on its face that Jonathan William Larson, Qun Zhong, and Darren R. Link are inventors. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 42 and on that basis denies them.

43. Denied.

44. Dropworks admits that Exhibit G appears to be a claim chart for claims 1-6, 8-10,

and 23 of the '310 patent. Dropworks denies that Exhibit G *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of those claims of the '310 patent. The remaining allegations in paragraph 44 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 44.

45. Dropworks admits that Exhibit M appears to be an IDS filed for United States Patent Application No. 16/413,416 that cites to the '310 patent, but denies that Dropworks filed that IDS or cited the '310 patent in it. Dropworks admits that United States Patent Application No. 16/413,416 is entitled "Systems and Methods Related to Continuous Flow Droplet Reaction," and names as an inventor Dropworks co-founder Andrew Larsen. Dropworks admits that Exhibit N appears to be an IDS filed for United States Patent Application No. 16/372,290 that cites to the '310 patent. Dropworks admits that United States Patent Application No. 16/372,290 is entitled "Systems and Methods for Serial Flow Emulsion Processes," and was filed by Dropworks. Dropworks admits that it has had notice of the '310 patent and Plaintiffs' allegations in the Complaint since the filing and service of Plaintiffs' Complaint (D.I. 1). Dropworks denies any remaining allegations in paragraph 45.

46. Denied.

47. Denied.

48. Denied.

49. Dropworks admits that, through its counsel, it filed an IDS for United States Patent Application No. 16/372,290 that cites to the '310 patent. Dropworks denies any remaining allegations in paragraph 49.

COUNT IV
(Declaratory Judgment of Infringement of the '310 Patent)

50. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

51. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory

Judgment Act, 28 U.S.C. §§ 2201 and 2202.

52. Admitted.

53. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit G appears to be a claim chart of claims 1-6, 8-10, and 23 of the '310 patent. Dropworks denies any remaining allegations in paragraph 53.

54. Denied.

55. Denied.

56. Denied.

57. Denied.

58. Denied.

59. Denied.

COUNT V
(Direct Infringement of U.S. Patent No. RE41,780)

60. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

61. Dropworks admits that Exhibit C appears to be a copy of U.S. Patent No. RE41,780, entitled "Chemical Amplification Based on Fluid Partitioning in an Immiscible Liquid," and which states on its face that it was issued on September 28, 2010. Dropworks denies any remaining allegations in paragraph 61.

62. Dropworks admits that the '780 patent states on its face that Brian L. Anderson, Bill W. Colston, and Christopher J. Elkin are inventors. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 62 and on that basis denies them.

63. Dropworks lacks sufficient knowledge or information to form a belief as to the

truth of the allegations set forth in paragraph 63 and on that basis denies them.

64. Denied.

65. Dropworks admits that Exhibit H appears to be a claim chart of claims 10-17, 19, 21-25, 27-30, 32-43, 45, and 47-51 of the '780 patent. Dropworks denies that Exhibit H *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of those claims of the '780 patent. The remaining allegations in paragraph 65 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 65.

66. Dropworks admits that Exhibit M appears to be an IDS filed for United States Patent Application No. 16/413,416 that cites to the '780 patent. Dropworks admits that United States Patent Application No. 16/413,416 is entitled "Systems and Methods Related to Continuous Flow Droplet Reaction," and names as an inventor Dropworks co-founder Andrew Larsen. Dropworks admits that Exhibit N appears to be an IDS filed for United States Patent Application No. 16/372,290 that cites to the '780 patent. Dropworks admits that United States Patent Application No. 16/372,290 is entitled "Systems and Methods for Serial Flow Emulsion Processes," and was filed by Dropworks. Dropworks admits that it has had notice of the '780 patent and Plaintiffs' allegations in the First Amended Complaint (the "FAC") since the filing and service of the FAC (D.I. 14). Dropworks denies any remaining allegations in paragraph 66.

67. Denied.

68. Denied.

69. Denied.

70. Dropworks admits that, through its counsel, it filed an IDS for United States Patent Application No. 16/372,290 that cites to the '780 patent. Dropworks denies any remaining allegations in paragraph 70.

COUNT VI
(Declaratory Judgment of Infringement of the '780 Patent)

71. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

72. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

73. Admitted.

74. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit H appears to be a claim chart of claims 10-17, 19, 21-25, 27-30, 32-43, 45, and 47-51 of the '780 patent.

Dropworks denies any remaining allegations in paragraph 74.

75. Denied.

76. Denied.

77. Denied.

78. Denied.

79. Denied.

80. Denied.

COUNT VII
(Direct Infringement of U.S. Patent No. RE43,365)

81. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

82. Dropworks admits that Exhibit D appears to be a copy of U.S. Patent No. RE43,365, entitled "Apparatus for Chemical Amplification Based on Fluid Partitioning in an Immiscible Liquid," and which states on its face that it was issued on May 8, 2012. Dropworks denies any remaining allegations in paragraph 82.

83. Dropworks admits that the '365 patent states on its face that Brian L. Anderson, Bill W. Colston, and Christopher J. Elkin are inventors. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 83 and on that basis denies them.

84. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 84 and on that basis denies them.

85. Denied.

86. Dropworks admits that Exhibit I appears to be a claim chart of claims 11-12, 14-15, and 17 of the '365 patent. Dropworks denies that Exhibit I *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of those claims of the '365 patent. The remaining allegations in paragraph 86 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 86.

87. Dropworks admits that Exhibit M appears to be an IDS filed for United States Patent Application No. 16/413,416 that cites to the '365 patent, but denies that Dropworks filed that IDS or cited the '365 patent in it. Dropworks admits that United States Patent Application No. 16/413,416 is entitled "Systems and Methods Related to Continuous Flow Droplet Reaction," and names as an inventor Dropworks co-founder Andrew Larsen. Dropworks admits that Exhibit N appears to be an IDS filed for United States Patent Application No. 16/372,290 that cites to the '365 patent. Dropworks admits that United States Patent Application No. 16/372,290 is entitled "Systems and Methods for Serial Flow Emulsion Processes," and was filed by Dropworks. Dropworks admits that it has had notice of the '365 patent and Plaintiffs' allegations in the FAC since the filing and service of the FAC (D.I. 14). Dropworks denies any remaining allegations in paragraph 87.

88. Denied.

89. Denied.

90. Denied.

91. Dropworks admits that, through its counsel, it filed an IDS for United States Patent Application No. 16/372,290 that cites to the '365 patent. Dropworks denies any remaining allegations in paragraph 91.

COUNT VIII
(Declaratory Judgment of Indirect Infringement of the '365 Patent)

92. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

93. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

94. Admitted.

95. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit I appears to be a claim chart of claims 11-12, 14-15, and 17 of the '365 patent. Dropworks denies any remaining allegations in paragraph 95.

96. Denied.

97. Denied.

98. Denied.

99. Denied.

100. Denied.

101. Denied.

COUNT IX
(Direct Infringement of U.S. Patent No. 9,056,289)

102. Dropworks incorporates each of the preceding paragraphs of its Answer as if set

forth fully herein.

103. Dropworks admits that Exhibit E appears to be a copy of U.S. Patent No. 9,056,289, entitled “Apparatus for Chemical Amplification Based on Fluid Partitioning in an Immiscible Liquid,” and which states on its face that it was issued on June 16, 2015. Dropworks denies any remaining allegations in paragraph 103.

104. Dropworks admits that the ’289 patent states on its face that David A. Weitz and Adam R. Abate are inventors. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 104 and on that basis denies them.

105. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 105 and on that basis denies them.

106. Denied.

107. Dropworks admits that Exhibit J appears to be a claim chart of claim 19 of the ’289 patent. Dropworks denies that Exhibit J *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of claim 19 of the ’289 patent. The remaining allegations in paragraph 107 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 107.

108. Dropworks admits that it has had notice of the ’289 patent and Plaintiffs’ allegations in the SAC since the filing and service of the SAC (D.I. 27). Dropworks denies any remaining allegations in paragraph 108.

109. Denied.

110. Denied.

111. Denied.

112. Dropworks admits that it has had knowledge of the ’289 patent since the filing

and service of the SAC. Dropworks denies any remaining allegations in paragraph 112.

COUNT X
(Declaratory Judgment of Indirect Infringement of the '289 Patent)

113. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

114. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

115. Admitted.

116. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit J appears to be a claim chart of claim 19 of the '289 patent. Dropworks denies any remaining allegations in paragraph 116.

117. Denied.

118. Denied.

119. Denied.

120. Denied.

121. Denied.

122. Denied.

COUNT XI
(Direct Infringement of U.S. Patent No. 8,822,148)

123. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

124. Dropworks admits that Exhibit X appears to be a copy of U.S. Patent No. 8,822,148 B2, entitled "Method of Performing PCR Reaction in Continuously Flowing Microfluidic Plugs," and which states on its face that it was issued on September 2, 2014.

Dropworks denies any remaining allegations in paragraph 124.

125. Dropworks denies that Rustem F. Ismagilov, Joshua David Tice, Cory John Gerdt, and Bo Zheng are the sole and true inventors of the '148 patent. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 125 and on that basis denies them.

126. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 126 and on that basis denies them.

127. Denied.

128. Dropworks admits that Exhibit Z appears to be a claim chart for claims 1-4 and 6-8 of the '148 patent. Dropworks denies that Exhibit Z *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of those claims of the '148 patent. The remaining allegations in paragraph 128 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 128.

129. Dropworks admits that Exhibit M appears to be an IDS filed for United States Patent Application No. 16/413,416 that cites to the '148 patent, but denies that Dropworks filed that IDS or cited the '148 patent in it. Dropworks admits that United States Patent Application No. 16/413,416 is entitled "Systems and Methods Related to Continuous Flow Droplet Reaction," and names as an inventor Dropworks co-founder Andrew Larsen. Dropworks admits that Exhibit N appears to be an IDS filed for United States Patent Application No. 16/372,290 that cites to the '148 patent. Dropworks admits that United States Patent Application No. 16/372,290 is entitled "Systems and Methods for Serial Flow Emulsion Processes," and was filed by Dropworks. Dropworks admits that it has had notice of the '148 patent and Plaintiffs' allegations in the TAC since the filing and service of the TAC (D.I. 71). Dropworks denies any

remaining allegations in paragraph 129.

130. Denied.

131. Denied.

132. Denied.

133. Dropworks admits that, through its counsel, it filed an IDS for United States Patent Application No. 16/372,290 that cites to the '148 patent. Dropworks denies any remaining allegations in paragraph 133.

COUNT XII
(Declaratory Judgment of Indirect Infringement of the '148 Patent)

134. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

135. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

136. Admitted.

137. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit Z appears to be a claim chart of claims 1-4 and 6-8 of the '148 patent. Dropworks denies any remaining allegations in paragraph 137.

138. Denied.

139. Denied.

140. Denied.

141. Denied.

142. Denied.

143. Denied.

COUNT XIII
(Direct Infringement of U.S. Patent No. 9,132,394)

144. Dropworks incorporates each of the preceding paragraphs of its Answer as if set forth fully herein.

145. Dropworks admits that Exhibit Y appears to be a copy of U.S. Patent No. 9,132,394 B2, entitled “System for Detection of Spaced Droplets,” and which states on its face that it was issued on September 15, 2015. Dropworks denies any remaining allegations in paragraph 145.

146. Dropworks denies that Anthony J. Makarewicz, Jr. and Amy L. Hiddessen are the sole and true inventors of the ’394 patent. Dropworks lacks sufficient knowledge or information to form a belief as to the truth of the remaining allegations set forth in paragraph 146 and on that basis denies them.

147. Denied.

148. Dropworks admits that Exhibit AA appears to be a claim chart for claims 25, 27-30, and 32 of the ’394 patent. Dropworks denies that Exhibit AA *prima facie* establishes that the Continuum Digital Flow PCR System meets any limitation of those claims of the ’394 patent. The remaining allegations in paragraph 148 are legal conclusions that need not be admitted or denied. Dropworks denies any remaining allegations in paragraph 148.

149. Dropworks admits that Exhibit M appears to be an IDS filed for United States Patent Application No. 16/413,416 that cites to the ’394 patent, but denies that Dropworks filed that IDS or cited the ’394 patent in it. Dropworks admits that United States Patent Application No. 16/413,416 is entitled “Systems and Methods Related to Continuous Flow Droplet Reaction,” and names as an inventor Dropworks co-founder Andrew Larsen. Dropworks admits that Exhibit N appears to be an IDS filed for United States Patent Application No. 16/372,290

that cites to the '394 patent. Dropworks admits that United States Patent Application No. 16/372,290 is entitled "Systems and Methods for Serial Flow Emulsion Processes," and was filed by Dropworks. Dropworks admits that it has had notice of the '394 patent and Plaintiffs' allegations in the TAC since the filing and service of the TAC (D.I. 71). Dropworks denies any remaining allegations in paragraph 149.

150. Denied.

151. Denied.

152. Denied.

153. Dropworks admits that, through its counsel, it filed an IDS for United States Patent Application No. 16/372,290 that cites to the '394 patent. Dropworks denies any remaining allegations in paragraph 153.

COUNT XIV
(Declaratory Judgment of Indirect Infringement of the '394 Patent)

154. Dropworks incorporates each of the preceding paragraphs in its Answer as if set forth fully herein.

155. Dropworks admits that Plaintiffs purport to bring this count under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

156. Admitted.

157. Dropworks admits that it has engaged in marketing communications concerning the Continuum Digital Flow PCR System. Dropworks admits that Exhibit AA appears to be a claim chart of claims 25, 27-30, and 32 of the '394 patent. Dropworks denies any remaining allegations in paragraph 157.

158. Denied.

159. Denied.

160. Denied.

161. Denied.

162. Denied.

163. Denied.

RESPONSE TO PRAYER FOR RELIEF

Dropworks denies that Plaintiffs are entitled to any of the relief requested in the TAC and denies that Plaintiffs are entitled to any relief at all. Dropworks denies any remaining allegations of the TAC.

AFFIRMATIVE AND OTHER DEFENSES

Without assuming any burden other than those imposed by operation of law, and without admitting that it bears the burden of proof with respect to any of the following, Dropworks alleges as follows from the facts presently known to it, while reserving the right to add additional defenses based on facts learned in discovery or otherwise.

FIRST DEFENSE

(Non-Infringement of the '193 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the '193 patent.

SECOND DEFENSE

(Invalidity of the '193 Patent)

The claims of the '193 patent are invalid under 35 U.S.C. §§ 101, 102, 103, 112, 115 and/or 116, or the Rules and Regulations of the U.S. Patent and Trademark Office ("PTO") set forth in Title 37 of the Code of Federal Regulations.

THIRD DEFENSE

(Non-Infringement of the '310 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the '310 patent.

FOURTH DEFENSE

(Invalidity of the '310 Patent)

The claims of the '310 patent are invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112, or the Rules and Regulations of the PTO set forth in Title 37 of the Code of Federal Regulations.

FIFTH DEFENSE

(Non-Infringement of the '780 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the '780 patent.

SIXTH DEFENSE

(Invalidity of the '780 Patent)

The claims of the '780 patent are invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112, or the Rules and Regulations of the PTO set forth in Title 37 of the Code of Federal Regulations.

SEVENTH DEFENSE

(Invalidity of the '780 Patent under 35 U.S.C. § 251)

The claims of the '780 patent are invalid under 35 U.S.C. § 251.

EIGHTH DEFENSE

(Non-Infringement of the '365 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the '365 patent.

NINTH DEFENSE

(Invalidity of the '365 Patent)

The claims of the '365 patent are invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112, or the Rules and Regulations of the PTO set forth in Title 37 of the Code of Federal Regulations.

TENTH DEFENSE

(Invalidity of the '365 Patent under 35 U.S.C. § 251)

The claims of the '365 patent are invalid under 35 U.S.C. § 251.

ELEVENTH DEFENSE

(Non-Infringement of the '289 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the '289 patent.

TWELFTH DEFENSE

(Invalidity of the '289 Patent)

The claims of the '289 patent are invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112, or the Rules and Regulations of the PTO set forth in Title 37 of the Code of Federal Regulations.

THIRTEENTH DEFENSE

(Failure to State a Claim - Infringement)

Plaintiffs have failed to state a claim for infringement of any of the Asserted Patents, because Plaintiffs have not pled any facts that would entitle them to that relief, including because Plaintiffs rely on patent applications for their allegations of infringement without alleging that those applications describe the functionality of any model or version of the Continuum Digital Flow PCR System.

FOURTEENTH DEFENSE

(Failure to State a Claim – Indirect Infringement)

Plaintiffs have failed to state a claim for a declaratory judgment of non-infringement of any of the Asserted Patents, because Plaintiffs have not pled any facts that would entitle them to that relief, including because Plaintiffs rely on patent applications for their allegations of infringement without alleging that those applications describe the functionality of any model or version of the Continuum Digital Flow PCR System.

FIFTEENTH DEFENSE

(Lack of Subject Matter Jurisdiction – Indirect Infringement)

The Court lacks subject matter jurisdiction to entertain Plaintiffs' indirect infringement claims because there is no live case or controversy with respect to infringement by third parties.

SIXTEENTH DEFENSE

(Unclean Hands)

Plaintiffs come to the Court with unclean hands due to the manner in which they obtained part or all of the purported bases to make the factual allegations in the TAC and due to Plaintiffs' assertions in this case of multiple patents obtained and/or being maintained based on inconsistent statements.

By way of non-limiting example, Plaintiffs have taken diametrically opposed positions before the Patent Office during prosecution of the '148 patent and before the Patent Trial and Appeal Board ("PTAB") in the pending *inter partes* review ("IPR") proceedings for the '780 and '365 patents. During prosecution of the '148 patent, Plaintiff The University of Chicago overcame a rejection of the pending claims as invalid in view of prior art by claiming priority to earlier filed provisional application No. 60/394,544 (the "'544 provisional"). The University of

Chicago argued that the '544 provisional disclosed PCR in droplets because it disclosed a polymerization reaction and "PCR is clearly a polymerization reaction." The examiner accepted The University of Chicago's argument (the only one offered in view of the pending obviousness rejection) and issued a Notice of Allowance expressly noting that "Applicants convinced the examiner that they pioneered performing PCR reactions in flowing droplets in the high-competitive field of microfluidics related to biochemical applications." The '193 patent, which is a continuation of the '148 patent, claims priority to the same '544 provisional. Plaintiffs in this case collectively assert that Dropworks infringes the '193 patent and the '148 patent, and so are necessarily alleging that the '148 patent and the '193 patent are valid and validly issued. Plaintiffs never retracted or corrected the statement made to the Patent Office regarding the alleged disclosures of the '544 provisional. In part on the basis of the never-retracted or corrected priority claim, Dropworks asserted the '193 patent as prior art against the '780 and '365 patents in the pending IPR proceedings. In response, through the same counsel representing all Plaintiffs in the action before this Court, Plaintiff LLNS asserted to the PTAB that the '193 patent is not prior art to the '780 and '365 patents because the '544 provisional does *not* disclose PCR in droplets. In direct conflict with its co-Plaintiff's statements during prosecution, LLNS asserted that "'polymerization reactions' are not synonymous with polymerase *chain* reactions" and "[t]here is no indication that the inventors of [the '148 and '193 patents] were contemplating PCR in microfluidic droplets at the time of the 544 provisional when describing polymerization reactions." The assertion of one or more of the '193 patent, the '148 patent, the '780 patent, and the '365 patent is thus made by Plaintiffs with unclean hands.

SEVENTEENTH DEFENSE

(Patent Misuse)

Plaintiffs are not entitled to relief by reason of their misuse of the Asserted Patents, including because Plaintiffs attempted to use their rights to the Asserted Patents to obtain or coerce an unfair commercial advantage.

EIGHTEENTH DEFENSE

(Prosecution History Estoppel)

Plaintiffs are estopped, based on statements, representations, and admissions made in the specification of the patent applications, made during prosecution of the patent applications that led to the Asserted Patents, and/or made during the prosecution of related applications, from asserting that the claims of the patents-in-suit are infringed by Dropworks, or by Dropworks' products or services, either directly, indirectly, contributorily, through the doctrine of equivalents, or otherwise.

By way of non-limiting example, Plaintiffs distinguished the purported inventions claimed in the '193 Patent or related applications from Shaw Stewart (WO 84/02000), and the '780 Patent or related applications from Handique (U.S. 6,130,098) in such a way as to estop Plaintiffs from asserting that the Continuum Digital Flow PCR system infringes the claims of the Patents-in-Suit, including through the doctrine of equivalents.

NINETEENTH DEFENSE

(Limitation on Damages)

The relief sought by Plaintiffs based on Dropworks' alleged infringement of the Asserted Patents is limited by 35 U.S.C. § 287 to the extent that the owner(s) of the Asserted Patents, and/or their licensees, failed to mark allegedly practicing products. Plaintiffs' claims of

infringement and/or claims for relief against Dropworks are barred or limited in whole or in part under 35 U.S.C. §§ 286, 287, and/or 288.

TWENTIETH DEFENSE

(No Equitable Relief)

On information and belief, Plaintiffs are not entitled to equitable relief with respect to the Asserted Patents under any theory because Plaintiffs have not and will not suffer irreparable harm, are not without adequate remedy at law, the balance of the hardships does not favor entry of an injunction, and/or public policy concerns weigh against any equitable relief. Plaintiffs' unclean hands additionally disqualify Plaintiffs from obtaining equitable relief.

TWENTY-FIRST DEFENSE

(No Exceptional Case)

Plaintiffs have no basis to allege that this case is an exceptional case justifying an award of attorney fees to Plaintiffs under 35 U.S.C. §§ 284 and 285.

TWENTY-SECOND DEFENSE

(No Recovery of Costs)

Plaintiffs are not entitled to costs and their costs are limited under 35 U.S.C. § 288.

TWENTY-THIRD DEFENSE

(Non-Infringement of the '148 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the '148 patent.

TWENTY-FOURTH DEFENSE

(Invalidity of the '148 Patent)

The claims of the '148 patent are invalid under 35 U.S.C. §§ 101, 102, 103, 112, 115

and/or 116, or the Rules and Regulations of the U.S. Patent and Trademark Office (“PTO”) set forth in Title 37 of the Code of Federal Regulations.

TWENTY-FIFTH DEFENSE

(Non-Infringement of the ’394 Patent)

Dropworks has not infringed, and will not infringe, directly or indirectly, literally or under the doctrine of equivalents, any valid and enforceable claim of the ’394 patent.

TWENTY-SIXTH DEFENSE

(Invalidity of the ’394 Patent)

The claims of the ’394 patent are invalid under 35 U.S.C. §§ 101, 102, 103, 112, 115 and/or 116, or the Rules and Regulations of the U.S. Patent and Trademark Office (“PTO”) set forth in Title 37 of the Code of Federal Regulations.

TWENTY-SEVENTH DEFENSE

(Judicial Estoppel)

Plaintiffs are estopped, based on conflicting statements, representations, and/or admissions made in other proceedings, from asserting that the claims of the patents-in-suit are infringed by Dropworks, or by Dropworks’ products or services, either directly, indirectly, contributorily, through the doctrine of equivalents, or otherwise.

By way of non-limiting example, Plaintiffs have taken diametrically opposed positions before the Patent Office during prosecution of the ’148 patent and before the Patent Trial and Appeal Board (“PTAB”) in the pending *inter partes* review (“IPR”) proceedings for the ’780 and ’365 patents. During prosecution of the ’148 patent, Plaintiff The University of Chicago overcame a rejection of the pending claims as invalid in view of prior art by claiming priority to earlier filed provisional application No. 60/394,544 (the “’544 provisional”). The University of

Chicago argued that the '544 provisional disclosed PCR in droplets because it disclosed a polymerization reaction and "PCR is clearly a polymerization reaction." The examiner accepted The University of Chicago's argument (the only one offered in response to the pending obviousness rejection) and issued a Notice of Allowance expressly noting that "Applicants convinced the examiner that they pioneered performing PCR reactions in flowing droplets in the high-competitive field of microfluidics related to biochemical applications." The '193 patent, which is a continuation of the '148 patent, claims priority to the same '544 provisional. Plaintiffs in this case collectively assert that Dropworks infringes the '193 patent and the '148 patent, and so are necessarily alleging that the '148 patent and the '193 patent are valid and validly issued. Plaintiffs never retracted or corrected the statement made to the Patent Office regarding the alleged disclosures of the '544 provisional. In part on the basis of the never-retracted or corrected priority claim, Dropworks asserted the '193 patent as prior art against the '780 and '365 patents in the pending IPR proceedings. In response, through the same counsel representing all Plaintiffs in the action before this Court, Plaintiff LLNS asserted to the PTAB that the '193 patent is not prior art to the '780 and '365 patents because the '544 provisional does *not* disclose PCR in droplets. In direct conflict with its co-Plaintiff's statements during prosecution, LLNS asserted that "'polymerization reactions' are not synonymous with polymerase *chain* reactions" and "[t]here is no indication that the inventors of [the '148 and '193 patents] were contemplating PCR in microfluidic droplets at the time of the 544 provisional when describing polymerization reactions."

Reservation of Additional Defenses and Claims

Dropworks is currently without sufficient knowledge or information upon which to form a belief as to whether additional defenses or counterclaims are available. Therefore, Dropworks

reserves the right to amend this Answer to assert any such additional defenses or counterclaims based on legal theories that may become apparent through discovery or through further legal analysis of Plaintiffs' positions, claims and allegations in this litigation.

JURY DEMAND

Dropworks requests a jury trial on all claims so triable.

PRAYER FOR RELIEF

WHEREFORE, Dropworks prays for the following relief:

1. That judgment on the TAC, and on each cause of action therein, be entered in favor of Dropworks;
2. That the Court deny Plaintiffs injunctive relief of any kind;
3. That this Court declare this case an exceptional case and award Dropworks its attorneys' fees and expenses under 35 U.S.C. § 285; and
4. Such other relief as the Court deems just and proper.

COUNTERCLAIMS

NATURE OF THE ACTION

1. Dropworks seeks a declaration that the '193 patent, '310 patent, '780 patent, '365 patent, '289 patent, '148 patent, and '394 patent are invalid and that Dropworks does not infringe them.

THE PARTIES

2. Dropworks is a life sciences corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 2560 55th Street, Suite 100, Boulder, CO 80301.

3. On information and belief, Bio-Rad is a life sciences corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 1000

Alfred Nobel Drive, Hercules, California 94547.

4. On information and belief, the University of Chicago is a university incorporated as an Illinois not-for-profit corporation, having a principal place of business at 5801 S. Ellis Avenue, Chicago, Illinois 60637.

5. On information and belief, LLNS is an entity owned by the U.S. government and operated by Lawrence Livermore National Security, LLC under contract with the U.S. Department of Energy's National Nuclear Security Administration, having a principal place of business at 2300 First Street, Suite 203, Livermore, California 94550.

6. On information and belief, Harvard University is a university incorporated as a Massachusetts non-for-profit institution, having a principal place of business at 1563 Massachusetts Avenue, Cambridge, Massachusetts 02138.

JURISDICTION AND VENUE

7. This action arises under the patent laws of the United States of America, 35 U.S.C. § 1 *et seq.* To the extent this Court has subject matter jurisdiction over the TAC, the Court has subject matter jurisdiction over these Counterclaims pursuant to 28 U.S.C. §§ 1331, 1338(a), 2201, and 2202.

8. This Court has personal jurisdiction over Plaintiffs, because Plaintiffs invoked the jurisdiction of this Court by filing this action.

9. Venue in this judicial district is proper over these Counterclaims pursuant to 28 U.S.C. § 1391(b) and (c).

FIRST COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '193 Patent)

10. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as

if set forth fully herein.

11. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '193 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to infringement of the '193 patent.

12. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '193 patent.

13. The '193 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, 112, 115, and/or 116.

14. By way of non-limiting example, the '193 patent is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103 in view of at least J.R. Burns, et al., *The Intensification of Rapid Reactions in Multiphase Systems Using Slug Flow in Capillaries*, 1 Lab on a Chip 10, 10-15 (2001) ("Burns I"), M.A. Burns, et al., *Microfabricated Structures for Integrated DNA Analysis*, 93 Proc. Nat'l Acad. Sci. USA 5556, 5556-61 (May 1996) ("Burns II"), U.S. Patent No. 5,270,183 ("Corbett"), Kopp, M.U. et al., *Chemical Amplification: Continuous-Flow PCR on a Chip*, 280 Science 1046-48 (1998) ("Kopp"), E.T. Lagally, et al., *Single-Molecule DNA Amplification and Analysis in an Integrated Microfluidic Device*, 73 Anal. Chem. 565, 565-70 (2001) ("Lagally"), U.S. Patent App. Pub. No. US 2002/0058332 ("Quake"), International Pub. No. WO 1984/02000 ("Shaw Stewart"), and/or B. Vogelstein, et al., *Digital PCR*, 96 Proc. Nat'l Acad. Sci. 9236, 9236-41 (1999) ("Vogelstein").

15. By way of further non-limiting example, the '193 patent is invalid under §§ 101, 102, 115, and/or 116 for failing to name the correct inventors as evidenced by the fact that

substantial, material portions of its disclosure are copied from the Quake prior art reference.

16. Dropworks seeks a declaratory judgment that the '193 patent is invalid under 35 U.S.C. §§ 101, 102, 103, 112, 115, and/or 116.

SECOND COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '193 Patent)

17. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

18. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '193 patent.

19. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '193 patent.

20. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '193 patent.

21. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '193 patent.

22. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '193 patent, and is not liable for any alleged infringement of the '193 patent.

THIRD COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '310 Patent)

23. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

24. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '310 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to infringement of the '310 patent.

25. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '310 patent.

26. The '310 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, and/or 112.

27. By way of non-limiting example, the '310 patent is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103, in view of at least International Pub. No. WO 2009/015296 ("Mathies"), U.S. Patent No. 8,889,083 ("Ismagilov '083"), and/or U.S. Patent No. 6,130,098 ("Handique").

28. Dropworks seeks a declaratory judgment that the '310 patent is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112.

FOURTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '310 Patent)

29. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

30. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '310 patent.

31. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '310 patent.

32. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '310 patent.

33. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '310 patent.

34. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '310 patent, and is not liable for any alleged infringement of the '310 patent.

FIFTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '780 Patent)

35. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

36. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '780 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to

infringement of the '780 patent.

37. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '780 patent.

38. The '780 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, and/or 112.

39. By way of non-limiting example, the '780 patent is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103, in view of at least Burns I, Burns II, Corbett, Kopp, Lagally, Quake, Shaw Stewart, and/or Vogelstein.

40. An actual controversy has arisen and now exists between the parties concerning the validity of the '780 patent.

41. Dropworks seeks a declaratory judgment that the '780 patent is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112.

SIXTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '780 Patent under 35 U.S.C. § 251)

42. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

43. The '780 patent is invalid for failure to comply with the requirements of 35 U.S.C. § 251.

44. By way of non-limiting example, the '780 patent is invalid under 35 U.S.C. § 251(d), because it is a reissue patent enlarging the scope of the claims of the original patent that failed to clearly indicate intent to broaden claims within two years of the grant of the original patent.

45. Dropworks seeks a declaratory judgment that the '780 patent is invalid under 35 U.S.C. § 251.

SEVENTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '780 Patent)

46. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

47. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '780 patent.

48. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '780 patent.

49. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '780 patent.

50. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '780 patent.

51. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '780 patent, and is not liable for any alleged infringement of the '780 patent.

EIGHTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '365 Patent)

52. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

53. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '365 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to infringement of the '365 patent.

54. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '365 patent.

55. The '365 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, and/or 112.

56. By way of non-limiting example, the '365 patent is invalid because it is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103, in view of at least *Burns I*, *Burns II*, *Corbett*, *Kopp*, *Lagally*, *Quake*, *Shaw Stewart*, and/or *Vogelstein*.

57. An actual controversy has arisen and now exists between the parties concerning the validity of the '365 patent.

58. Dropworks seeks a declaratory judgment that the '365 patent is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112.

NINTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '365 Patent under 35 U.S.C. § 251)

59. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as

if set forth fully herein.

60. The '365 patent is invalid for failure to comply with the requirements of 35 U.S.C. § 251.

61. By way of non-limiting example, the '365 patent is invalid under 35 U.S.C. § 251(d), because it is a reissue patent enlarging the scope of the claims of the original patent applied for over two years from the grant of the original patent, and that failed to clearly indicate intent to broaden claims within two years of the grant of the original patent.

62. Dropworks seeks a declaratory judgment that the '365 patent is invalid under 35 U.S.C. § 251.

TENTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '365 Patent)

63. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

64. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '365 patent.

65. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '365 patent.

66. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '365 patent.

67. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with

respect the '365 patent.

68. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '365 patent, and is not liable for any alleged infringement of the '365 patent.

ELEVENTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '289 Patent)

69. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

70. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '289 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to infringement of the '289 patent.

71. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect the '289 patent.

72. The '289 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, and/or 112.

73. By way of non-limiting example, the '289 patent is invalid because it is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103, in view of at least Burns I, Burns II, Corbett, Kopp, Lagally, Quake, Shaw Stewart, and/or Vogelstein.

74. An actual controversy has arisen and now exists between the parties concerning

the validity of the '289 patent.

75. Dropworks seeks a declaratory judgment that the '289 patent is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112.

TWELFTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '289 Patent)

76. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

77. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '289 patent.

78. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '289 patent.

79. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '289 patent.

80. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect the '289 patent.

81. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '289 patent, and is not liable for any alleged infringement of the '289 patent.

THIRTEENTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '148 Patent)

82. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

83. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '148 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to infringement of the '148 patent.

84. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '148 patent.

85. The '148 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, and/or 112.

86. By way of non-limiting example, the '148 patent is invalid because it is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103, in view of at least Burns I, Burns II, Corbett, Kopp, Lagally, Quake, Shaw Stewart, and/or Vogelstein.

87. An actual controversy has arisen and now exists between the parties concerning the validity of the '148 patent.

88. Dropworks seeks a declaratory judgment that the '148 patent is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112.

FOURTEENTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '148 Patent)

89. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as

if set forth fully herein.

90. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '148 patent.

91. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '148 patent.

92. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '148 patent.

93. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect the '148 patent.

94. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '148 patent, and is not liable for any alleged infringement of the '148 patent.

FIFTEENTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of the '394 Patent)

95. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

96. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '394 patent. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an

actual and justiciable controversy exists between Dropworks and Plaintiffs with regard to infringement of the '394 patent.

97. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '394 patent.

98. The '394 patent is invalid for failure to comply with the conditions for patentability, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, and/or 112.

99. By way of non-limiting example, the '394 patent is invalid because it is anticipated and/or obvious under 35 U.S.C. §§ 102 and 103, in view of at least Clausell-Tormos et al., *Droplet-Based Microfluidic Platforms for the Encapsulation and Screening of Mammalian Cells and Multicellular Organisms*, Chemistry & Biology 15, 427-437 (May 2008), and U.S. Patent No. 10,054,961 to Ismagilov et al.

100. By another way of non-limiting example, the '394 patent is invalid for improper inventorship, including because it improperly omits inventors from related applications in the chain of priority.

101. An actual controversy has arisen and now exists between the parties concerning the validity of the '394 patent.

102. Dropworks seeks a declaratory judgment that the '394 patent is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112.

SIXTEENTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of the '394 Patent)

103. Dropworks incorporates each of the preceding paragraphs of its Counterclaims as if set forth fully herein.

104. In their TAC, Plaintiffs have expressly accused Dropworks of infringing the '394 patent.

105. As a result of Plaintiffs' actions and statements, including the filing of the TAC, an actual and justiciable controversy exists between Dropworks and the Plaintiffs with regard to infringement of the '394 patent.

106. Dropworks has not been and is not now infringing, either directly or indirectly, by inducement, or contributorily, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '394 patent.

107. A judicial declaration and determination is necessary and appropriate at this time given Plaintiffs' allegations and in order that Dropworks may ascertain its rights and duties with respect to the '394 patent.

108. By this Counterclaim, Dropworks seeks a judicial declaration and determination that Dropworks does not infringe and has not directly or indirectly infringed, either literally or under the doctrine of equivalents, contributed to the infringement of, or induced the infringement of any valid claim of the '394 patent, and is not liable for any alleged infringement of the '394 patent.

JURY DEMAND

Dropworks requests a jury trial on all claims so triable.

PRAYER FOR RELIEF

WHEREFORE, Dropworks request that judgment be entered in favor of Dropworks and against Plaintiffs:

1. Declaring that each of the Asserted Patents is invalid;
2. Declaring that Dropworks does not infringe, directly or indirectly, literally or

under the doctrine of equivalents, any claim of the Asserted Patents;

3. Awarding Dropworks costs and attorneys' fees;
4. Declaring Dropworks' case to be exceptional and awarding Dropworks attorneys' fees and expenses under 35 U.S.C. § 285; and
5. Awarding Dropworks such other relief as the Court deems just and proper.

DROPWORKS' JURY DEMAND

Dropworks requests a jury trial on all claims and counterclaims so triable.

OF COUNSEL:

Daralyn J. Durie
Eugene Novikov
Andrew L. Perito
Eneda Hoxha
Joyce C. Li
DURIE TANGRI LLP
217 Leidesdorff Street
San Francisco, CA 94111
Telephone: 415-362-6666
Facsimile: 415-236-6300
ddurie@durietangri.com
enovikov@durietangri.com
aperito@durietangri.com
ehoxda@durietangri.com
jli@durietangri.com

Kira A. Davis
Moon Hee Lee
DURIE TANGRI LLP
953 East 3rd Street
Los Angeles, CA 90013
Telephone: 213-992-4499
Facsimile: 415-236-6300
kdavis@durietangri.com
mlee@durietangri.com

/s/ Jason J. Rawnsley

Frederick L. Cottrell, III (#2555)
Jason J. Rawnsley (#5379)
Alexandra M. Ewing (#6407)
RICHARDS, LAYTON & FINGER, P.A.
One Rodney Square
920 North King Street
Wilmington, DE 19801
(302) 651-7700
cottrell@rlf.com
rawnsley@rlf.com
ewing@rlf.com

Attorneys for Dropworks, Inc.

Dated: March 22, 2021